KEPmLINE

mL-CS8A 96 x 96 DIN 1/4 8 CHANNEL ANALOG SCANNER

CE

mL-CS8A

1 ALARM NONE
SENSOR-1
20.0 ℃
PV
PO
22.5 SV

F1 F2 F3 F4

mL-CS8A 8 Channel Analog Scanner
- 320 x 240 pixel TFT LCD display
- 8 Analog inputs
- ON-OFF control
- Relay outputs
- Sensor error detection
- Adjustable "process variable" offset
- 3 Different alarm and pre-alarm types for each channel (High, Low and Band Alarms)
- User defined channel labels
- 3 user defined units of measure labels plus 6 standard labels
- Display scan modes
- Operating with Real Time Clock (RTC)
- RS-485 and Rs232 with ModBus RTU communication protocol
- Data Logging to USB Flash Memory (special order, optional)
- Adjustable data logging time interval (special order, optional)
- Password protection for programming mode

mL-CS8A series 8 channel analog scanner devices are designed for measuring and optionally logging process variables (not just temperature). They can be used in many applications with their, alarm outputs, selectable alarm functions, RS-232 / RS-485 communications.

SPECIFICATIONS

INPUT
Analog Inputs : 0-20mA / 4-20mA and 0-10VDC Analog
Accuracy : ± 0.25% of full scale
Sensor Break Protection : Upscale
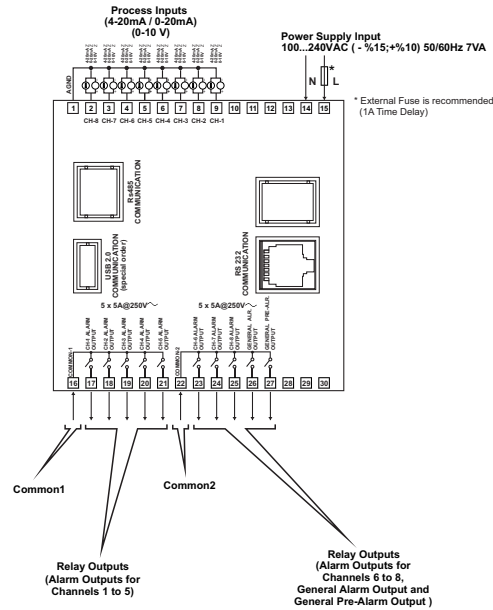**Sampling Time :** 400msecs.
Input Resistance : 100Ω

OUTPUT
Relay : Resistive Load 5A@250VAC
(Electrical Life : 100,000 operation (Full Load))

DISPLAY
LCD Display : 320x240 pixel TFT LCD

POWER SUPPLY
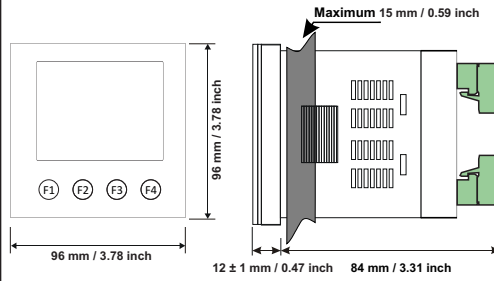100 - 240 VAC (-15% / +10%) 50/60 Hz. 7VA

PHYSICAL SPECIFICATIONS
Weight : 400 gr.
Dimension : 96 x 96 mm, Depth:96 mm
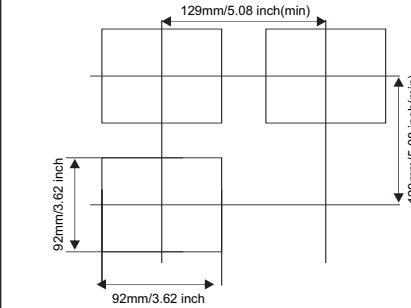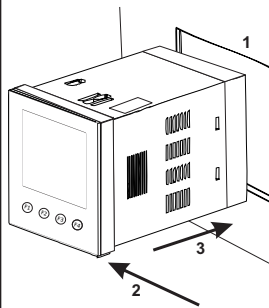**Panel Cut-Out :** 92 x 92 mm

Electrical Wiring Diagram

Process Inputs
(4-20mA / 0-20mA)
(0-10 V)

Power Supply Input
100...240VAC (- %15;+%10) 50/60Hz 7VA

N L *
* External Fuse is recommended
(1A Time Delay)

CH-8 CH-7 CH-6 CH-5 CH-4 CH-3 CH-2 CH-1

RS-485 COMMUNICATION
USB2.0 COMMUNICATION (special order)
RS 232 COMMUNICATION

5 x 5A@250V

Common1

Common2

Relay Outputs
(Alarm Outputs for Channels 1 to 5)

Relay Outputs
(Alarm Outputs for Channels 6 to 8, General Alarm Output and General Pre-Alarm Output)

ⓘ **CH = CHANNEL**

Front View and Dimensions of mL-CS8A

Maximum 15 mm / 0.59 inch

96 mm / 3.78 inch

F1 F2 F3 F4

96 mm / 3.78 inch

12 ± 1 mm / 0.47 inch   84 mm / 3.31 inch

Panel Cut-Out

129mm/5.08 inch(min)
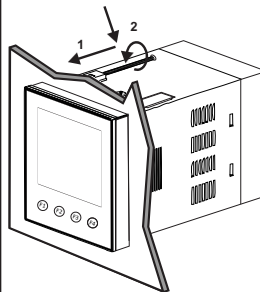
129mm/5.08 inch(min)

92mm/3.62 inch

92mm/3.62 inch

Panel Mounting

1-Before mounting the device in your panel, make sure that the cut-out is of the right size.

2-Check front panel gasket position

3-Insert the device through the cut-out. If the mounting clamps are on the unit, remove them before inserting the unit to the panel.

Installation Fixing Clamp

The unit is designed for panel mounting.

1-Insert the unit in the panel cut-out from the front side.

2- Insert the mounting clamps to the holes that located top and bottom sides of device and screw up the fixing screws until the unit completely immobile within the panel.

Removing from the Panel
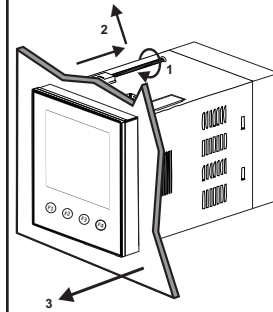
1-Loosen the screws.

2-Pull mounting clamps from top and bottom fixing sockets.

3-Pull the unit through the front side of the panel

Definition of Front Panel

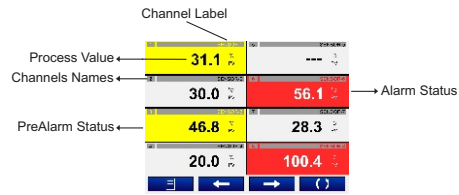320 x 240 Pixel TFT LCD

F1 F2 F3 F4

Standard Function Buttons
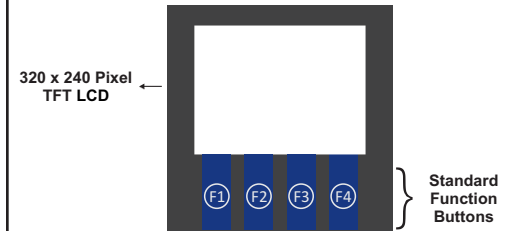
MENU BUTTON
Used to access Menu page.

AUTO BUTTON
Used to auto-scan pages.

ENTER BUTTON
Used to go in to selected page, to make parameter's submenu available to change and to confirm parameter's

BACK BUTTON
Used to go back to previous menu and to cancel parameter's change.

UP BUTTON
Used to go up in menus and lists and also used to increase parameter's value.

DOWN BUTTON
Used to go downin menus and lists and also used to decrease parameter's value.

LEFT BUTTON
Used to go left in menus.

RIGHT BUTTON
Used to go right in menus.

DELETE BUTTON
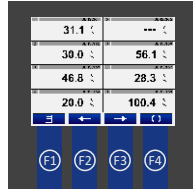Used to erase logs on the screen.

SETTINGS

ADVANCE SETTINGS

LOGS

LANGUAGE

Main Operation Screens Definition

If the display type parameter value Screen Type = MULTIPLE

Channel Label
Process Value
Channels Names

31.1	---
30.0	56.1
46.8	28.3
20.0	100.4

PreAlarm Status → Alarm Status

MAIN OPERATION SCREEN

31.1	---
30.0	56.1
46.8	28.3
20.0	100.4

F1 F2 F3 F4

(i) If the display scan parameter value Screen Change = ENABLE, each main operation screen is showing on LCD screen during time defined by Change Time parameter value.

If the display type parameter value Screen Type = SINGLE

Alarm Messages
Channel Number
Channel Name

SENSOR-1
ALARM NONE

20.0 °C PV

Process Value
Channel Output Status
PO   22.5 SV

MAIN OPERATION (CHANNEL-1 SCREEN)

1 ALARM NONE
SENSOR-1
20.0 °C PV
PO   22.5 SV
F1 F2 F3 F4

Press number F2 or F3 buttons for accessing the relevant channel screen.

MAIN OPERATION (CHANNEL-4 SCREEN)

4 ALARM NONE
SENSOR-4
20.0 °C PV
PO   22.5 SV
F1 F2 F3 F4

(i) If more than one alarm messages is present, each alarm message is showing on LCD screen during 1 second.
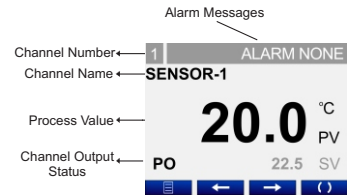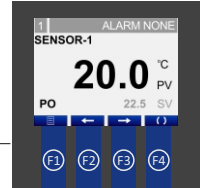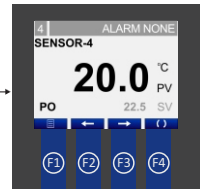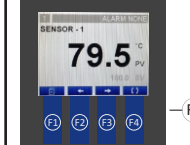
(i) If the display scan parameter value Screen Change = ENABLE, each main operation screen is showing on LCD screen during time defined by Change Time(sec) parameter value
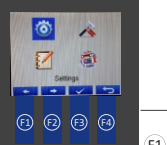

Accessing the Operator Parameter Menus

MAIN OPERATION SCREEN
SENSOR-1
79.5 PV
F1 F2 F3 F4

When the F1 menu button is pressed while the main screen is on the page, the menu page is displayed.

MENU SCREEN
Settings
F1 F2 F3 F4

Press F1 or F2 direction buttons to move to the Settings tab.

OPERATOR PARAMETERS PASSWORD SCREEN
NEW USER PASSWORD
F1 F2 F3 F4

Press F3 button. If password is different from 0, password screen opens.

OPERATOR PARAMETERS PASSWORD SCREEN
NEW USER PASSWORD
F1 F2 F3 F4
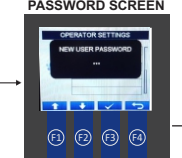
Enter the password value using the F1 and F2 buttons.

OPERATOR PARAMETERS PASSWORD INPUT SCREEN
NEW USER PASSWORD
F1 F2 F3 F4
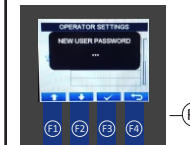
Confirm the characters one by one by pressing F3 button. Once you have confirmed the last character, you will proceed to the operator parameters screen.

OPERATOR PARAMETERS (CHANNEL-1)
Channel 1
Channel 2
Channel 3
Channel 4
Channel 5
Channel 6
F1 F2 F3 F4

Press the F1 or F2 buttons to highlight the channel and press the F3 button.

OPERATOR PARAMETERS (CHANNEL-1 PARAMETERS)
Alarm Set(°F) 100.0
Pre. Alarm Set(°F) 90.0
Units F
F1 F2 F3 F4

Select the relevant parameter with the F1 or F2 buttons.

PARAMETERS CHANGE
Alarm Set(°F) 100.0
Pre. Alarm Set(°F) 90.0
Units F
F1 F2 F3 F4

Press the F3 button to select the parameter.

PARAMETERS CHANGE
Alarm Set(°F) 100.0
Pre. Alarm Set(°F) 90.0
Units F
F1 F2 F3 F4

Use the F1 and F2 buttons to change the value of the parameter.

OPERATOR PARAMETERS (CHANNEL-1 PARAMETERS)
Alarm Set(°F) 100.0
Pre. Alarm Set(°F) 90.0
Units F
F1 F2 F3 F4
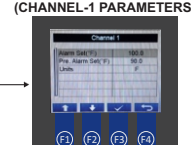
Press the F3 button to save the parameter value.

Accessing the Technician Parameter Menus

MAIN OPERATION SCREEN
SENSOR-1
79.5 PV
F1 F2 F3 F4
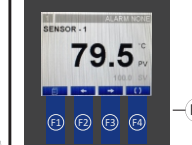
When the F1 menu button is pressed while the main screen is on the page, the menu page is displayed.
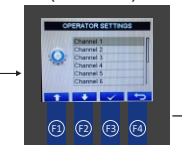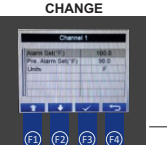
MENU SCREEN
Advanced Settings
F1 F2 F3 F4
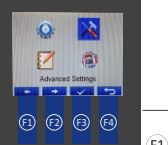
Press F1 or F2 direction buttons to move to the Advanced Settings tab.

TECHNICIAN PARAMETERS PASSWORD SCREEN
NEW TECH. PASSWORD
Date&Time Settings
Change Password
F1 F2 F3 F4
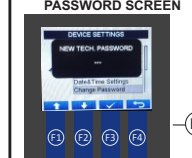
Press F3 button. If password is different from 0, password screen opens.

TECHNICIAN PARAMETERS PASSWORD SCREEN
NEW TECH. PASSWORD
Date&Time Settings
Change Password
F1 F2 F3 F4

Enter the password value using the F1 and F2 buttons.

TECHNICIAN PARAMETERS PASSWORD INPUT SCREEN
NEW TECH. PASSWORD
Date&Time Settings
Change Password
F1 F2 F3 F4
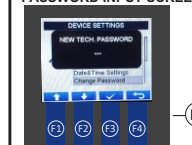
Confirm the characters one by one by pressing F3 button. Once you have confirmed the last character, you will proceed to the operator parameters

TECHNICIAN PARAMETERS (CONTROL PARAMETERS
Control Parameters
Device Settings
Test and Calibration
F1 F2 F3 F4

Use the F1 and F2 buttons to scroll to the Control parameters and press the F3 button.

TECHNICIAN PARAMETERS (CHANNEL-1)
Channel 1
Channel 2
Channel 3
Channel 4
Channel 5
Channel 6
F1 F2 F3 F4

Select the relevant channel with the F1 and F2 buttons.

TECHNICIAN PARAMETERS (CHANNEL-1 PARAMETERS)
Status ON
Name SENSOR-1
Alarm Type HIGH
PreAlarm Type HIGH
Hysteresis(°C) 1.0
Band Alarm(°C) 10.0
F1 F2 F3 F4

Press the F3 button to select the parameter.

PARAMETERS CHANGE
Status ON
Name SENSOR-1
Alarm Type HIGH
PreAlarm Type HIGH
Hysteresis(°C) 1.0
Band Alarm(°C) 10.0
F1 F2 F3 F4

Use the F1 and F2 buttons to change the value of the parameter. Press the F3 button to save the parameter value.

OTHER PARAMETERS CHANGE
Other Params
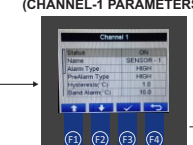Control Relay NO
PreAlarm Relay NO
User Unit 1 Gate
User Unit 2 feet
User Unit 3 inch
F1 F2 F3 F4
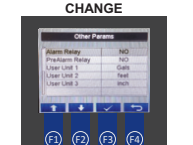
Use the F1 and F2 buttons to change the value of the parameter. Press the F3 button to save the parameter value.

DEVICE SETTINGS (RS232 SETTINGS)
RS-485 Settings
Baudrate 9600
Parity NONE
Stop Bit 1
Id 1
F1 F2 F3 F4

With the F1 and F2 buttons you can select and change the RS232 parameters. Use the F3 button to save.

DEVICE SETTINGS (Rs485 SETTINGS)
RS-485 Settings
Baudrate 9600
Parity NONE
Stop Bit 1
Id 1
F1 F2 F3 F4
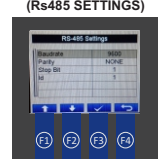
With the F1 and F2 buttons you can select and change the RS485 parameters. Use the F3 button to save.

DEVICE SETTINGS (DATE TIME SETTINGS)
DATE & TIME SETTING
20.03.2017
09:06:53
F1 F2 F3 F4

With the F3 button you can select the Date and Time parameters and you can change the value with the F1, F2 buttons.

DEVICE SETTINGS (PASSWORD CHANGE)
NEW TECH. PASSWORD
Date&Time Settings
Change Password
F1 F2 F3 F4
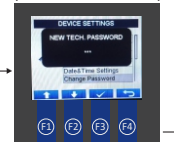
Use the F1 and F2 buttons to change the value of the parameter. Confirm the characters one by one by pressing F3 button.

DEVICE SETTINGS (DEFAULT SETTINGS)
DEVICE SETTINGS
Default settings?
YES   NO
F1 F2 F3 F4
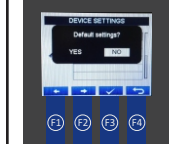
Use the F1 button to move to the "YES" tab and press the F3 button. In 1-3 seconds the device will return to factory settings.

Operator Pages Parameters Definetions

Channel Number
1 ALARM NONE
SENSOR-1
20.0 °C PV
PO   22.5 SV
F1 F2 F3 F4
Device Function Buttons
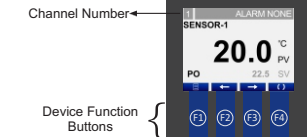
Alarm Set
Alarm set value for selected channel is can be adjusted according to this parameter. It can be adjust between -200 °C to +650 °C.

Pre. Alarm Set
Pre- Alarm set value for selected channel is can be adjusted according to this parameter. It can be adjust between -200 °C to +650 °C.

Unit Select
Type of unit value is adjusted according to this parameter for selected channel which is shown on display.The value of parameter °F, psi, Ph, %, mm, m or User Defined (3)

Operator Password Change
Operator Password for device is adjusted by this parameter.

(i) If no operation is performed for 20 seconds in operator parameters section, device turns to main operation screen automatically.

Technician Pages Parameters Definietions

Technician Parameters

Channel Status
Channel is enabled and disabled by this parameter. If channel is selected as a disabled this channel is can not be observed in main operation screen for single view mode, channel alarm is not controlled and Analog value for this channel is can not be recording on USB file. It can be adjust between 0 to 1. If parameter value,
  0 = DISABLE
  1 = ENABLE

Channel Name "Channels label definition"
All channels have their own label, is displayed in main operation screen. channel labels is can be adjusted by this parameter. Channel labels are can be adjusted maximum 10 characters.

Alarm Type
Alarm type for selected channel is can be adjusted according to this parameter.
It can be adjust between 0 to 2. Parameter values;
  0 = LOW   1 = HIGH   2 = BAND

PreAlarm Type
Pre-Alarm type for selected channel is can be adjusted according to this parameter.
It can be adjust between 0 to 2. Parameter values;
  0 = LOW   1 = HIGH   2 = BAND

Hysteresis
Hysteresis parameter value for Alarm and Pre-Alarm is can be adjusted by this parameter. It can be adjust between -400 °C to +400 °C.

Band Alarm
Bandwith for Band alarm is can be adjusted by this parameter value.
It can be adjust between -400 °C to +400 °C.

Offset
Process offset value for selected channel is can be adjusted by this parameter.
It can be adjust between -50.0 °C to +50.0 °C.

Sensor Alarm
Sensor break alarm for selected channel is can be disable or enable by this parameter.
It can be adjust between 0 to 1. Parameter values;
  0 = DISABLE
  1 = ENABLE

Calib. Low
Calibration Low value for selected channel can be adjusted according to this parameter.

Calib. High
Calibration High value for selected channel can be adjusted according to this parameter.

Sensor Type
Analog input signal to be applied according to this parameter for selected channel which is shown on Display.
  0 = 4-20 mA   1 = 0-20 mA   2 = 0-10 V

Control Parameters- Other Parameters

Screen Type
Main operation screen type is adjusted by this parameter.
It can be adjust between 0 to 1. Parameter values;
  0 = MULTIPLE
  1 = SINGLE

Screen Change
Display channel scanner mode is adjusted by this parameter.
It can be adjust between 0 to 1. Parameter values;
  0 = DISABLE
  1 = ENABLE

Change Time(sec)
Display scan period is adjusted by this parameter. All main operation screen is displayed during time defined by this parameter. It can be adjust between 1 to 3600 secs.

BackLightOnLevel
Display backlight is can be controlled by this parameter value. It can be adjust between 50 to 100.

BackLightOffLevel
ECO mode for backlight; in case off selection no backlight . This parameter is can be adjusted from 1 to 100.

BackLightOffTime
Time for the access to economic backlight mode. This parameter is can be adjusted from 10 to 300.

Device Settings - RS-232 Settings

Baudrate
Modbus communication baudrate for RS232 is can be adjusted by this parameter.
It can be adjust between 0 to 5. Parameter values;
  0 = 4800   3 = 38400
  1 = 9600   4 = 57600
  2 = 19200   5 = 115200

Parity
Modbus communication parity bit for RS232 is can be adjusted by this parameter.
It can be adjust between 0 to 2. Parameter values;
  0 = NONE
  1 = ODD
  2 = EVEN

Stop Bit
Modbus communication stop bit for RS232 is can be adjusted by this parameter.
It can be adjust between 1 to 2. Parameter values;
  1 = 1 Stop bit
  2 = 2 Stop bits

Id
Modbus communication device ID for RS232 is can be adjusted by this parameter.
This parameter value is can be adjusted from 1 to 247.

Device Settings - RS-485 Settings

Baudrate
Modbus communication baudrate for RS485 is can be adjusted by this parameter.
It can be adjust between 0 to 5. Parameter values;
  0 = 4800
  1 = 9600
  2 = 19200
  3 = 38400
  4 = 57600
  5 = 115200

Parity
Modbus communication parity bit for Rs485 is can be adjusted by this parameter.
It can be adjust between 0 to 2. Parameter values;
  0 = NONE
  1 = ODD
  2 = EVEN

Stop Bit
Modbus communication stop bit for Rs485 is can be adjusted by this parameter.
It can be adjust between 1 to 2. Parameter values;
  1 = 1 Stop bit
  2 = 2 Stop bits

Id
Modbus communication device ID for Rs485 is can be adjusted by this parameter.
This parameter value is can be adjusted from 1 to 247.

Device Settings - USB Settings (USB option is custom order)

File Name
USB file name for recording Analog values is can be adjusted by this parameter. File name can be adjusted maximum 10 characters. Recording file on usb is "csv" format and all data is seperated each other with tab. Example file format is explained below.

Label
When the Analog values are recorded on USB file, user can be defined label for this recording. Label can be adjusted maximum 10 characters. Label are recorded at the end of every lines of file.

Date Record
When the Analog values are recorded on USB file, user can be save the recording time on the file. Recording time is recorded at the beginning of every lines of file.
It can be adjust between 0 to 1. Parameter values;
  0 = DISABLE
  1 = ENABLE

Record Time(sec)
Record time interval is can be adjusted by this parameter. Analog values are recorded on USB file with this time interval.It can be adjust between 0 to 3600 secs. If this parameter value is 0 usb recording is disabled.

Flash Memory "USB Flash Memory Stick Detected Test"
Detection of the USB memory device being inserted is tested with this parameter. When the USB memory device is plugged in, the message "OK" is displayed.

Internal Recording
The device can record in memory. When a USB memory is inserted, the recordings are transferred to the USB memory with the file name containing the current date and time.(Exp: 2017-07-30-09-08-12-CHAN8.txt) 📄➡📁 icon and transaction status (%) are displayed on the screen until the transfer is complete.
If you want to eject the USB memory during transfer or recording; Press the F4 button for 5 seconds and the USB memory must be removed (within 5 seconds) before the 📁 icon on the screen disappears. If the USB stick is not removed during this time, the transfer will resume from where it left off.
Not: The device can store up to (Record time x 2) daily memos in its memory.

USB Recording File Example

2011-06-23-17:26:09	130.6	129.1	130.5	129.5	130.0	129.9	130.3	129.1	SAMPLE
2011-06-23-17:26:10	130.6	129.1	130.5	129.5	130.0	129.9	130.3	129.1	SAMPLE
2011-06-23-17:26:12	130.6	129.1	130.5	129.5	130.0	129.9	130.3	129.1	SAMPLE
2011-06-23-17:26:13	130.6	129.1	130.5	129.5	130.0	129.9	130.3	129.1	SAMPLE
Recording Time	CH-1 Value	CH-2 Value	CH-3 Value	CH-4 Value	CH-5 Value	CH-6 Value	CH-7 Value	CH-8 Value	Label

Device Settings - ETHERNET Settings (ETHERNET option is custom order)

DHCP
DHCP is an automatic configuration protocol used on IP networks. If DHCP is enable, device is adjust our ethernet communication configuration parameters (IP, Netmask,Gateway) dynamicaly for your network system. If DHCP is disable, you must adjust ethernet configuration parameters (IP, Netmask,Gateway) for your network system. It can be adjust between 0 to 1. Parameter Values;

  0 = DHCP DISABLE
  1 = DHCP ENABLE

Ip No
IP address for ethernet communication is can be adjusted by this parameter. If DHCP is selected as a enable there is no need to adjust to this parameter, if DHCP selected as a disable then user must adjust this parameter.

Port No
Ethernet port number is can be adjusted by this parameter.

Netmask
Subnet mask for ethernet communication is can be adjusted by this parameter. If DHCP is selected as a enable there is no need to adjust to this parameter, if DHCP is selected as a disable then user must adjust this parameter according to the their own network system.

Gateway
Gateway for ethernet communication is can be adjusted by this parameter. If DHCP is selected as a enable there is no need to adjust to this parameter, if DHCP is selected as a disable then user must adjust this parameter according to the their own network system.

Tcplp Selection
TCP/IP Protocol is can be adjusted by this parameter. It can be adjust between 0 to 1.
  0 = Modbus RTU Over TCP/IP
  1 = Modbus RTU TCP/IP

Device Settings - Date and Time Settings
Date and Time for device is adjusted by this parameter.

Device Settings - Password Change
Technician Password for device is adjusted by this parameter.

Device Settings -Default Settings
This section is used to return default settings back.

Device Settings - Software Update
It allows you to update the device's software with a USB flash memory.
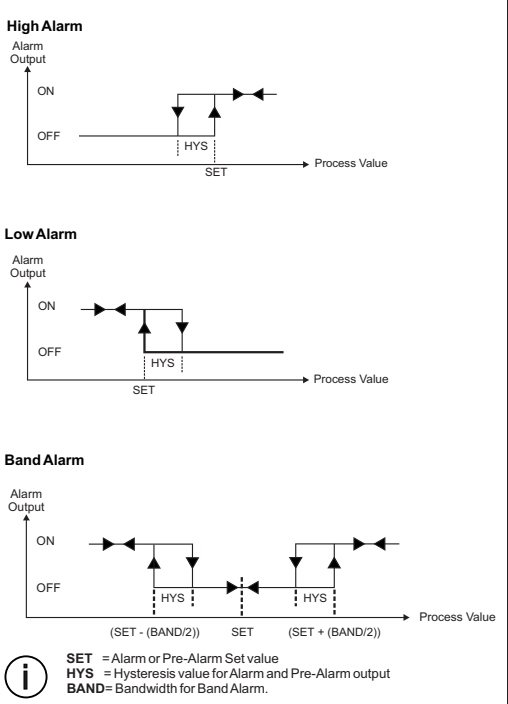
Logs
In this page, events logs are shown.

Language Selection
In this page, the language is selected for the device.

Operation Graphics of Alarm and Pre-Alarm Types

High Alarm

Low Alarm

Band Alarm

ⓘ
SET = Alarm or Pre-Alarm Set value
HYS = Hysteresis value for Alarm and Pre-Alarm output
BAND = Bandwidth for Band Alarm.

Modbus Addresses

Output Status Addresses

Outputs Status Addresses		Unit	Address
CH-1 ALARM OUT	Channel-1 Alarm Output Status	-	00001
CH-2 ALARM OUT	Channel-2 Alarm Output Status	-	00002
CH-3 ALARM OUT	Channel-3 Alarm Output Status	-	00003
CH-4 ALARM OUT	Channel-4 Alarm Output Status	-	00004
CH-5 ALARM OUT	Channel-5 Alarm Output Status	-	00005
CH-6 ALARM OUT	Channel-6 Alarm Output Status	-	00006
CH-7 ALARM OUT	Channel-7 Alarm Output Status	-	00007
CH-8 ALARM OUT	Channel-8 Alarm Output Status	-	00008
GEN. ALR. OUT	General Alarm Output Status	-	00009
GEN.PRE.ALR. OUT	General Pre-alarm Output Status	-	00010

Note-1: Outputs status are can be readed with modbus function-1 (read coils). Device's response for modbus function-1 is always 2 byte data although the modbus function request less than 9 outputs port.

Process Values Addresses

Process Values Addresses		Unit	Address
CH-1 P. VALUE	Channel-1 Process Value	As Set	30001
CH-2 P. VALUE	Channel-2 Process Value	As Set	30002
CH-3 P. VALUE	Channel-3 Process Value	As Set	30003
CH-4 P. VALUE	Channel-4 Process Value	As Set	30004
CH-5 P. VALUE	Channel-5 Process Value	As Set	30005
CH-6 P. VALUE	Channel-6 Process Value	As Set	30006
CH-7 P. VALUE	Channel-7 Process Value	As Set	30007
CH-8 P. VALUE	Channel-8 Process Value	As Set	30008

Note-2: Process values are can be readed with modbus function-4 (read input register). Because of the process values are displayed on LCD screen with point, the reading values from modbus is 10 times than the real values.

Parameters Modbus Addresses

Parameter Values Addresses		Unit	Address
CH-1 NAME	Channel-1 Name	String	42000 - 42004
CH-2 NAME	Channel-2 Name	String	42005 - 42009
CH-3 NAME	Channel-3 Name	String	42010 - 42014
CH-4 NAME	Channel-4 Name	String	42015 - 42019
CH-5 NAME	Channel-5 Name	String	42020 - 42024
CH-6 NAME	Channel-6 Name	String	42025 - 42029
CH-7 NAME	Channel-7 Name	String	42030 - 42034
CH-8 NAME	Channel-8 Name	String	42035 - 42039
FILE NAME	USB File Name	String	42040 - 42044
LABEL	USB Label	String	42045 - 42049
CH-1 ALARM SET	Channel-1 Alarm Set Value	(•) As Set	42050
CH-1 PRE A. SET	Channel-1 Prealarm Set Value	(•) As Set	42051
CH-1 HYSTERESIS	Channel-1 Hysteresis Value	(•) As Set	42052
CH-1 BAND ALARM	Channel-1 Bandwith Value	(•) As Set	42053
CH-2 ALARM SET	Channel-2 Alarm Set Value	(•) As Set	42054
CH-2 PRE A. SET	Channel-2 Prealarm Set Value	(•) As Set	42055
CH-2 HYSTERESIS	Channel-2 Hysteresis Value	(•) As Set	42056
CH-2 BAND ALARM	Channel-2 Bandwith Value	(•) As Set	42057
CH-3 ALARM SET	Channel-3 Alarm Set Value	(•) As Set	42058
CH-3 PRE A. SET	Channel-3 Prealarm Set Value	(•) As Set	42059
CH-3 HYSTERESIS	Channel-3 Hysteresis Value	(•) As Set	42060
CH-3 BAND ALARM	Channel-3 Bandwith Value	(•) As Set	42061
CH-4 ALARM SET	Channel-4 Alarm Set Value	(•) As Set	42062
CH-4 PRE A. SET	Channel-4 Prealarm Set Value	(•) As Set	42063
CH-4 HYSTERESIS	Channel-4 Hysteresis Value	(•) As Set	42064
CH-4 BAND ALARM	Channel-4 Bandwith Value	(•) As Set	42065
CH-5 ALARM SET	Channel-5 Alarm Set Value	(•) As Set	42066
CH-5 PRE A. SET	Channel-5 Prealarm Set Value	(•) As Set	42067
CH-5 HYSTERESIS	Channel-5 Hysteresis Value	(•) As Set	42068
CH-5 BAND ALARM	Channel-5 Bandwith Value	(•) As Set	42069
CH-6 ALARM SET	Channel-6 Alarm Set Value	(•) As Set	42070
CH-6 PRE A. SET	Channel-6 Prealarm Set Value	(•) As Set	42071
CH-6 HYSTERESIS	Channel-6 Hysteresis Value	(•) As Set	42072
CH-6 BAND ALARM	Channel-6 Bandwith Value	(•) As Set	42073
CH-7 ALARM SET	Channel-7 Alarm Set Value	(•) As Set	42074
CH-7 PRE A. SET	Channel-7 Prealarm Set Value	(•) As Set	42075
CH-7 HYSTERESIS	Channel-7 Hysteresis Value	(•) As Set	42076
CH-7 BAND ALARM	Channel-7 Bandwith Value	(•) As Set	42077

Parameter	Description		Value	Address
CH-8 ALARM SET	Channel-8 Alarm Set Value	(+)	As Set	42078
CH-8 PRE A. SET	Channel-8 Prealarm Set Value	(+)	As Set	42079
CH-8 HYSTERESIS	Channel-8 Hysteresis Value	(+)	As Set	42080
CH-8 BAND ALARM	Channel-8 Bandwith Value	(+)	As Set	42081
CH-1 KALIB. LOW	Ch-1 Calibration Low Point Value	-		42082
CH-1 KALIB. HIGH	Ch-1 Calibration High Point Value	-		42083
CH-2 KALIB. LOW	Ch-2 Calibration Low Point Value	-		42084
CH-2 KALIB. HIGH	Ch-2 Calibration High Point Value	-		42085
CH-3 KALIB. LOW	Ch-3 Calibration Low Point Value	-		42086
CH-3 KALIB. HIGH	Ch-3 Calibration High Point Value	-		42087
CH-4 KALIB. LOW	Ch-4 Calibration Low Point Value	-		42088
CH-4 KALIB. HIGH	Ch-4 Calibration High Point Value	-		42089
CH-5 KALIB. LOW	Ch-5 Calibration Low Point Value	-		42090
CH-5 KALIB. HIGH	Ch-5 Calibration High Point Value	-		42091
CH-6 KALIB. LOW	Ch-6 Calibration Low Point Value	-		42092
CH-6 KALIB. HIGH	Ch-6 Calibration High Point Value	-		42093
CH-7 KALIB. LOW	Ch-7 Calibration Low Point Value	-		42094
CH-7 KALIB. HIGH	Ch-7 Calibration High Point Value	-		42095
CH-8 KALIB. LOW	Ch-8 Calibration Low Point Value	-		42096
CH-8 KALIB. HIGH	Ch-8 Calibration High Point Value	-		42097
CH-1 INDICATOT UNIT	Channel-1 Indicatot Unit	-		42098
CH-2 INDICATOT UNIT	Channel-2 Indicatot Unit	-		42099
CH-3 INDICATOT UNIT	Channel-3 Indicatot Unit	-		42100
CH-4 INDICATOT UNIT	Channel-4 Indicatot Unit	-		42101
CH-5 INDICATOT UNIT	Channel-5 Indicatot Unit	-		42102
CH-6 INDICATOT UNIT	Channel-6 Indicatot Unit	-		42103
CH-7 INDICATOT UNIT	Channel-7 Indicatot Unit	-		42104
CH-8 INDICATOT UNIT	Channel-8 Indicatot Unit	-		42105
CH-1 ANG. INPUT TYPE	Channel-1 Analog Input Type	-		42106
CH-2 ANG. INPUT TYPE	Channel-2 Analog Input Type	-		42107
CH-3 ANG. INPUT TYPE	Channel-3 Analog Input Type	-		42108
CH-4 ANG. INPUT TYPE	Channel-4 Analog Input Type	-		42109
CH-5 ANG. INPUT TYPE	Channel-5 Analog Input Type	-		42110
CH-6 ANG. INPUT TYPE	Channel-6 Analog Input Type	-		42111
CH-7 ANG. INPUT TYPE	Channel-7 Analog Input Type	-		42112
CH-8 ANG. INPUT TYPE	Channel-8 Analog Input Type	-		42113
CH-1 ALARM TYPE	Channel-1 Alarm Type	-		42114
CH-1 PRE.A TYPE	Channel-1 Prealarm Type	-		42115
CH-1 SENSOR ALARM	Channel-1 SensorBreak Alarm	-		42116
CH-2 ALARM TYPE	Channel-2 Alarm Type	-		42117
CH-2 PRE.A TYPE	Channel-2 Prealarm Type	-		42118
CH-2 SENSOR ALARM	Channel-2 SensorBreak Alarm	-		42119
CH-3 ALARM TYPE	Channel-3 Alarm Type	-		42120
CH-3 PRE.A TYPE	Channel-3 Prealarm Type	-		42121
CH-3 SENSOR ALARM	Channel-3 SensorBreak Alarm	-		42122
CH-4 ALARM TYPE	Channel-4 Alarm Type	-		42123
CH-4 PRE.A TYPE	Channel-4 Prealarm Type	-		42124
CH-4 SENSOR ALARM	Channel-4 SensorBreak Alarm	-		42125
CH-5 ALARM TYPE	Channel-5 Alarm Type	-		42126
CH-5 PRE.A TYPE	Channel-5 Prealarm Type	-		42127
CH-5 SENSOR ALARM	Channel-5 SensorBreak Alarm	-		42128
CH-6 ALARM TYPE	Channel-6 Alarm Type	-		42129
CH-6 PRE.A TYPE	Channel-6 Prealarm Type	-		42130
CH-6 SENSOR ALARM	Channel-6 SensorBreak Alarm	-		42131
CH-7 ALARM TYPE	Channel-7 Alarm Type	-		42132
CH-7 PRE.A TYPE	Channel-7 Prealarm Type	-		42133
CH-7 SENSOR ALARM	Channel-7 SensorBreak Alarm	-		42134
CH-8 ALARM TYPE	Channel-8 Alarm Type	-		42135
CH-8 PRE.A TYPE	Channel-8 Prealarm Type	-		42136
CH-8 SENSOR ALARM	Channel-8 SensorBreak Alarm	-		42137
TECH. PW.	Technician Section Password	-		42138
OPR. PW.	Operator Section Password	-		42139
CH-1 I/O	Channel-1 Enable/Disable	-		42140
CH-2 I/O	Channel-2 Enable/Disable	-		42141
CH-3 I/O	Channel-3 Enable/Disable	-		42142
CH-4 I/O	Channel-4 Enable/Disable	-		42143
CH-5 I/O	Channel-5 Enable/Disable	-		42144
CH-6 I/O	Channel-6 Enable/Disable	-		42145
CH-7 I/O	Channel-7 Enable/Disable	-		42146
CH-8 I/O	Channel-8 Enable/Disable	-		42147
CH-1 P.V OFFSET	Channel-1 Process Offset	(+)	As Set	42148
CH-2 P.V OFFSET	Channel-2 Process Offset	(+)	As Set	42149
CH-3 P.V OFFSET	Channel-3 Process Offset	(+)	As Set	42150
CH-4 P.V OFFSET	Channel-4 Process Offset	(+)	As Set	42151

Parameter	Description		Value	Address
CH-5 P.V OFFSET	Channel-5 Process Offset	(+)	As Set	42152
CH-6 P.V OFFSET	Channel-6 Process Offset	(+)	As Set	42153
CH-7 P.V OFFSET	Channel-7 Process Offset	(+)	As Set	42154
CH-8 P.V OFFSET	Channel-8 Process Offset	(+)	As Set	42155
RS232 BAUDRATRE	RS232 Baudrate Selection	-		42156
RS232 PARITY	RS232 Parity Bit Selection	-		42157
RS232 STOP BIT	RS232 Stop Bit Selection	-		42158
RS232 ID	RS232 Device ID Value	-		42159
DSP. TYPE	Main Operation Screen Type	-		42160
DSP. SCAN	Display Scan ON/OFF	-		42161
SCAN TIME	Display Scan Period	Sec		42162
DSP BACKLIGHT	LCD Display Backlight Mode	-		42163
RS485 BAUDRATRE	RS485 Baudrate Selection	-		42164
RS485 PARITY	RS485 Parity Bit Selection	-		42165
RS485 STOP BIT	RS485 Stop Bit Selection	-		42166
RS485 ID	RS485 Device ID Value	-		42167
LANGUAGE	Device Language Selection	-		42168
SAVE TIME	USB Time Record Ena/Dis	-		42169
SAMPLE TIME	USB Record Time Interval	Sec		42170
DHCP	Dhcp Enable/Disable(**)	-		42183
ETH. PORT	Ethernet Port No(**)	-		42184
ETH. IP NO	Ethernet Ip No(**)	-		42185
ETH. NETMASK	Ethernet Netmask(**)	-		42187
ETH. GATEWAY	Ethernet Gateway(**)	-		42189
MAC ADR.	Device Mac Address(**)	-		42191

(i) (+) These parameters are displayed on LCD screen with point, so that the Parameters values are 10 times than the real values for modbus function.

(i) (**) These parameters are only read for modbus function.

Installation

⚠ Before beginning installation of this product, please read the instruction manual and warnings below carefully.

In package ,

- One piece unit

- Two pieces mounting clamps

- One piece instruction manual

A visual inspection of this product for possible damage occured during shipment is recommended before installation. It is your responsibility to ensure that qualified mechanical and electrical technicians install this product.

If there is danger of serious accident resulting from a failure or defect in this unit, power off the system and separate the electrical connection of the device from the system.

The unit is normally supplied without a power supply switch or a fuse. Use power switch and fuse as required.

Be sure to use the rated power supply voltage to protect the unit against damage and to prevent failure.

Keep the power off until all of the wiring is completed so that electric shock and trouble with the unit can be prevented.

Never attempt to disassemble, modify or repair this unit. Tampering with the unit may results in malfunction, electric shock or fire.

Do not use the unit in combustible or explosive gaseous atmospheres.

During the equipment is putted in hole on the metal panel while mechanical installation some metal burrs can cause injury on hands, you must be careful.

Montage of the product on a system must be done with it's fixing clamps. Do not perform the mounting of the device with inappropriate fixing clamp. Be sure that device will not fall while mounting.

Warranty

Kessler-Ellis Products warrants that the equipment delivered is free from defects in material and workmanship. This warranty is provided for a period of two years. The warranty period starts from the delivery date. This warranty is in force if duty and responsibilities which are determined in warranty document and instruction manual performs by the customer completely.

Maintenance

Repairs should only be performed by trained and specialized personnel. Cut power to the device before accessing internal parts. Do not clean the case with hydrocarbon-based solvents (Petrol, Trichlorethylene etc.). Use of these solvents can reduce the mechanical reliability of the device. Use a cloth dampened in ethyl alcohol or water to clean the external plastic case.
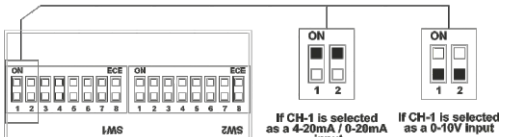
Other Information

Company Information:
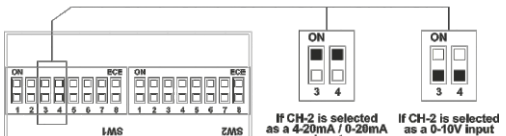Kessler-Ellis Products
10 Industrial Way East
Eatontown, NJ 07724

Phone: 800-631-2165 or 732-935-1320
Fax: 732-935-9344
Email: info@kep.com
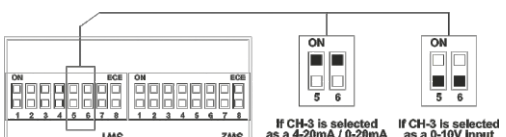**Web:** www.kep.com

Analog Input Type Dip Switch Positions

CH-1 input type selection

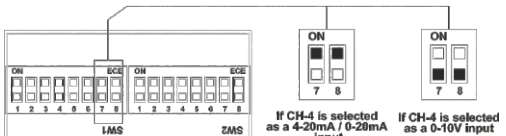If CH-1 is selected as a 4-20mA / 0-20mA input

If CH-1 is selected as a 0-10V Input

CH-2 input type selection

If CH-2 is selected as a 4-20mA / 0-20mA input

If CH-2 is selected as a 0-10V input

CH-3 input type selection

If CH-3 is selected as a 4-20mA / 0-20mA input

If CH-3 is selected as a 0-10V input

CH-4 input type selection
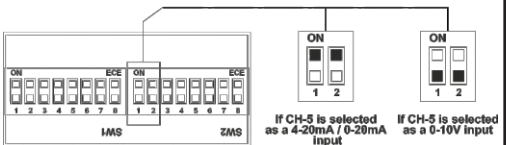
If CH-4 is selected as a 4-20mA / 0-20mA input

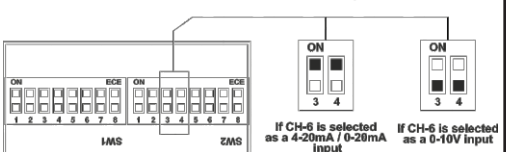If CH-4 is selected as a 0-10V input

⚠ To change the analog input type from voltage to current while the device is operating, first separate the voltage input then, change the input type to currrent and connect to current to the analog input.

Because of this reason a voltage input shouldn't be connected to the analog input of the device, while the device is in the current measurement mode, otherwise analog input can be damaged.
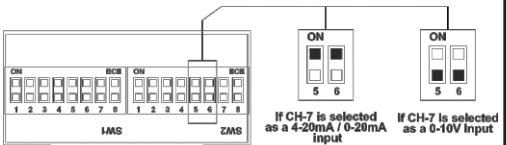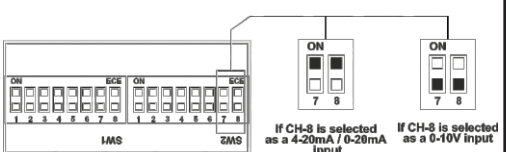
CH-5 input type selection

If CH-5 is selected as a 4-20mA / 0-20mA input

If CH-5 is selected as a 0-10V input

CH-6 input type selection

If CH-6 is selected as a 4-20mA / 0-20mA input

If CH-6 is selected as a 0-10V input

CH-7 input type selection

If CH-7 is selected as a 4-20mA / 0-20mA input

If CH-7 is selected as a 0-10V input

CH-8 input type selection

If CH-8 is selected as a 4-20mA / 0-20mA input

If CH-8 is selected as a 0-10V input

Ordering Information

Model Number	Description
mL-CS8A	8 Channel Analog Scanner 1/4 DIN Case 100 to 240 VAC Supply Voltage (-15%; +10%) 50/60Hz 0-20mA, 4-20mA and 0-10VDC Analog Inputs 10 Relay Outputs with 2 common for each NO (5A @ 250VAC with Resistive Load), for each common contact 15A max. (15A @ 250VAC with Resistive Load) RS-485 & RS-232 Serial Communication with Modbus RTU Protocol

KEPmLINE